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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,680	07/19/2005	Andrew Nicholas Dames	IP21L4.001APC	9332

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EXAMINER

WONG, TINA MEI SENG

ART UNIT	PAPER NUMBER
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2874

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/03/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/03/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcarter@kmob.com
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Office Action Summary

Application No.

10/542,680

Applicant(s)

DAMES ET AL.

Examiner

Tina M. Wong

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/10/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted by the International Bureau under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-14, 16 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,176,908 to Wagner.

In regards to claim 12, Wagner teaches an optical connector comprising at least one optical guide (21, 22, 67, 68) for carrying optical radiations, a total internal reflection surface upon which in use the radiations impinge (Column 5 Lines 55-61), so that the radiation in the optical guide is reflected by the surface towards an optical element of the connector (Figures 1, 3 & 6) and means (guide surfaces) enabling the connector to interlock with any other optical connector which is appropriately matingly configured.

In regards to claim 13, Wagner teaches a surface is such that, in use, the radiation in the optical guide may be reflected by said surface towards an optical element of the connector and may alternatively, in use, be such that its internal reflection properties may be frustrated to allow the radiation to pass across the surface. (Figure 6; dichroic film or beamsplitter)

In regards to claim 14, Wagner teaches a means of enabling the connector to interlock with any other optical connector which is appropriately matingly configured and which incorporates means which will frustrate the total internal reflection of the first connector if and when the connector were to be interlocked with any such other connector; and with the interlock-enabling means of the connector being so operatively positioned that, with the connector interlocked to another suitable connector as aforesaid, the total internal reflection surface of the connector will be in sufficient proximity to the total internal reflection frustrating means of the other connector as to allow the optical radiations to pass across the connection then formed by the two interlocking connectors.

In regards to claim 16, Wagner teaches the connector to comprise a plurality of optical guides.

In regards to claim 18, Wagner teaches an additional reflection means between the optical guides and the surface. (Column 7)

In regards to claim 19, although Wagner teaches the refractive means between the optical guides and the surface adapted to change the radiation's direction as emitted from the optical guides to the direction of the radiation incident on the total internal reflection surface, it is noted by the Examiner that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138

In regards to claim 20, Wagner teaches the total internal reflection surface to be located on at least two sides of a prism.

In regards to claim 21, Wagner teaches a multiple-connector system comprising a first optical connector including at least one optical guide for carrying optical radiations, a total internal reflection surface upon which, in use, the radiations impinge, so that the radiation in the optical guide is reflected by the surface towards an optical element of the first connector, means enabling the connector to interlock with another optical connector which is appropriately matingly configured and one or more other optical connectors, each of which other connectors is appropriately matingly configured to interlock with the first optical connector and which incorporates means which will frustrate the total internal reflection of the first connector if and when the other connector were to be interlocked with the first connector, wherein the interlock-enabling means of the first connector is operatively positioned so that with the first connector interlocked to the other connector as aforesaid, the total internal reflection surface of the first connector will be in sufficient proximity to the total internal reflection frustrating means of the other connector as to allow the optical radiations to pass across the connection then formed by the two interlocking connectors

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,176,908 to Wagner as applied to claim 12 above.

In regards to claim 15, Wagner teaches all discussed above but fails to specifically teach the optical element towards which radiation is reflected treats the radiation so that eye-damaging radiation remains within the connector. However, Wagner does teach the connectors ability to adjust the wavelength being transmitted and blocked. Since it would be advantageous to protect the eye from radiation damage, it would have been obvious at the time the invention was made to a person having ordinary skill in the art for Wagner to have treated the reflected radiation so that there is no damage to the eye.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,176,908 to Wagner as applied to claim 12 above in view of U.S. Patent 5,666,448 to Schoenwald et al.

In regards to claim 17, Wagner teaches all discussed above but fails to specifically teach the interlocking means to allow a connector to be first attached in a non-surface frustrating manner and to incorporate a mechanism which provides a snap-action final closure for the frustration of the surface. However, over time, with the improvements of optical couplers/connectors, it has been found to be advantageous for the interlocking means to be a snap action closure in order to interchange coupling means or optical guides in order accommodate for the necessary requirements. By allowing for the connector to be adjustable, this increases the versatility of the connector. This type of connection (snap action closure) is evidenced by Schoenwald et al, where Schoenwald shows the ability to adjust and interchange the type of optical guides to be attached to the ends of the connectors. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art for

the interlocking means to allow a connector to be attached and to incorporate a mechanism which provides a snap action final closure.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. None of the documents cited by the Examiner discloses or reasonably suggests the allowable subject matter discussed above.

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449. None of the references submitted by Applicant discloses or reasonably suggest the allowable subject matter discussed above.

Inventorship


This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M. Wong whose telephone number is (571) 272-2352. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tina M Wong
Patent Examiner
Art Unit 2874